



Citizen Summary

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

ArcelorMittal Indiana Harbor East 2011 Draft Wastewater Permit NPDES Permit IN0000094 August 2011

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1) **Introduction**

Under the federal Clean Water Act, facilities that treat and discharge treated wastewater into a water of the United States (stream, lake, or wetland) must obtain and comply with a National Pollutant Discharge Elimination System (NPDES) permit. The IDEM Office of Water Quality (OWQ) administers the federal NPDES permitting program under a memorandum of understanding with the United States Environmental Protection Agency (U.S. EPA).

NPDES permits are effective for a specific time frame, up to five years. IDEM must reissue NPDES permits at least every five years. Permittees must apply for a renewal before their permit's expiration date. The permit renewal process allows IDEM to update permit conditions to account for facility operations and environmental regulations that may have changed over the term of the permit. IDEM is proposing to renew the NPDES permit for ArcelorMittal Indiana Harbor East (IN0000094) for a five year period.

An individual permit is a permit specifically tailored to an individual facility. Individual NPDES permit documents include the Draft Permit and a Fact Sheet that contain extensive technical details and regulatory information about the permitted facility and the NPDES permit conditions.

IDEM is providing this additional Citizen Summary to explain the purpose of a NPDES permit and permitting terminology; summarize the steps in the NPDES permitting process and how the public can participate in the review process; and summarize the permit renewal conditions being proposed for the ArcelorMittal Indiana Harbor East NPDES permit renewal.

2) The purpose of an NPDES permit

The purpose of a NPDES permit is to control water pollution. NPDES permits contain limits for the amount of pollutants a facility can discharge in wastewater. NPDES permits also contain the facility's requirements for monitoring pollutants in its discharge and for submitting monitoring reports to IDEM's Office of Water Quality (OWQ).

3) Permitting terminology

Clean Water Act (CWA) Section 301(g) – Section 301(g) of the Clean Water Act and state rules found in the Indiana Administrative Code at 327 IAC 5-3-4(b)(2) allow for a variance from the applicable Best Available Treatment BAT requirements through the development of proposed modified effluent limitations (PMELs) for the non-conventional pollutants of ammonia, chlorine, color, iron, and total phenols (4AAP) provided that the following conditions are met:

- (1) The PMELs will meet the categorical BPT effluent limitations (Technology Based Effluent Limits (TBELs)) or applicable Water Quality-Based Effluent Limitations (WQBELs), whichever are more stringent;
- (2) The PMELs will not result in any additional requirements on other point or nonpoint sources;
- (3) The PMELs will not interfere with the attainment or maintenance of water quality which will protect public water supplies, aquatic life and recreational activities; and,
- (4) The PMELs will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity or teratogenicity) or synergistic propensities.

Clean Water Act (CWA) Section 316(a) - Under Section 316(a) of the CWA, thermal effluent, such as cooling water, is considered a pollutant, and facilities wishing to discharge thermal effluent into a water source must apply for a NPDES permit. Section 316(a) allows a thermal discharger to obtain a thermal effluent variance by demonstrating that less stringent thermal effluent limitations would still protect aquatic life.

Clean Water Act (CWA) Section 316(b) - Under Section 316(b) of the CWA, cooling water intake structure (CWIS) shall be established so that the location, design, construction, and capacity of the CWIS reflect the best technology available to minimize adverse environmental impact.

Cooling water (40 CFR part 125.93) - Cooling water means water used for contact or non-contact cooling. This includes water used for equipment cooling, evaporative cooling tower makeup, and dilution of effluent heat content. The intended use of the cooling water is to absorb waste heat rejected from the process or processes used, or from auxiliary operations on the facility's premises. Cooling water that is used in a manufacturing process either before or after it is used for cooling is considered process water for the purposes of calculating the percentage of a facility's intake flow that is used for cooling purposes in §125.91(a)(4).

Daily maximum - the maximum allowable daily discharge for any calendar day.

Draft permit - a document prepared prior to the public comment period by the commissioner indicating the commissioner's tentative decision to: (1) issue or deny; (2) modify; (3) revoke and reissue; (4) terminate; or (5) reissue a permit.

Effluent - a wastewater discharge from a point source to the waters of the state.

Effluent limitation - any restriction established by the IDEM commissioner on quantities, discharge rates, and concentrations of pollutants that are discharged, or will be discharged, from point sources into waters of the state.

Effluent limitations guideline - a regulation adopted by the administrator of the U.S. EPA, under Section 304(b) of the CWA, for use in establishing effluent limitations for specific point sources within a particular industrial class or category.

Monthly average - the total mass or flow-weighted concentration of all daily discharges during a calendar month on which daily discharges are sampled or measured, divided by the number of daily discharges sampled and/or measured during such calendar month. The monthly average discharge limitation is the highest allowable average monthly discharge for any calendar month.

National Pollutant Discharge Elimination System or NPDES - the national program for: (1) issuing; (2) modifying; (3) revoking and reissuing; (4) terminating; (5) denying; (6) monitoring; and (7) enforcing permits for the discharge of pollutants from point sources and imposing and enforcing pretreatment requirements by the U.S. EPA or an authorized state under Sections 307, 318, 402, and 405 of the Clean Water Act.

Outfall - the point of discharge from a point source.

Permit - any written authorization, license, or equivalent document issued to regulate the discharge of pollutants, the construction of water pollution treatment or control facilities, or land application of sludge or waste products.

Point source - any discernible, confined, and discrete conveyance, including, but not limited to, any of the following from which pollutants are or may be discharged: (1) Pipe. (2) Ditch. (3) Channel. (4) Tunnel. (5) Conduit. (6) Well. (7) Discrete fissure. (8) Container. (9) Rolling stock. (10) Concentrated animal feeding operation. (11) Landfill leachate collection system. (12) Vessel. (13) Other floating craft.

Process wastewater - any water that, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Sanitary wastewater - (commonly called sewage) the liquid and water-carried waste from residences, commercial buildings, industrial plants, institutions and other places of human occupancy that is transported by sewers and is primarily composed of human and household waste.

Wastewater - liquid or water-carried wastes from industrial, municipal, agricultural, or other sources.

4) Steps in the process for the renewal of the ArcelorMittal Burns Harbor, LLC NPDES permit

Drafting the NPDES Permit and Fact Sheet:

IDEM uses a great deal of information and data in the development of the permit renewal documents, which include the Draft NPDES Permit and a Fact Sheet. IDEM permit writers review information in the NPDES permit application submitted by the facility, the conditions contained in the currently applicable permit document, the facility's compliance history, the effluent quality and characteristics, the receiving water's characteristics, and the applicable state and federal laws, regulations, rules and guidelines. The draft NPDES permit and Fact Sheet for ArcelorMittal Indiana Harbor East have been developed with the cooperation and oversight of the U.S. EPA.

Public participation:

When IDEM completes its work on the Draft NPDES Permit and Fact Sheet, time will be provided for the public to review and comment on the documents. IDEM announces the opportunity for public review and comment by placing a notice in the legal section of the local newspaper and sending letters and e-mails to people and organizations that have requested notification. At least 30 days are provided for the public to review and submit written comments on a Draft NPDES Permit. As part of the public participation process, IDEM also holds formal hearings, at which time oral comments are received.

Comments addressing the technical or legal basis of the permit conditions or additional suggestions to control water pollution are deemed most helpful. IDEM will make a final decision about permit conditions only after a thorough review of all timely submitted comments, and may make changes to the permit conditions based on issues raised during the public participation process. When the final permit documents are issued, IDEM will provide a formal response for all timely submitted comments for the public to review.

Where to review a copy of the Draft NPDES Permit and Fact Sheet:

Copies of the Draft NPDES Permit and Fact Sheet for ArcelorMittal Indiana Harbor East are available for public review at these locations:

On IDEM's website at <http://www.in.gov/idem/5338.htm>

Lake County Health Department
2293 North Main Street
Crown Point, Indiana 46307
Telephone: (219) 755-3525

Gary Public Library/Main Branch
220 West 5th Avenue
Gary, Indiana 46402

IDEM Northwest Regional Office
8380 Louisiana Street
Merrillville, IN 46410
Phone: (219) 757-0265
Toll Free: (888) 209-8892 (within Indiana)
Fax: (219) 757-0267

IDEM's Indianapolis Office
Indiana Government Center North, Room 1201
100 North Senate Avenue
Indianapolis, IN 46204

How to submit comments:

IDEM will accept written comments that are postmarked or e-mailed to the agency by September 30, 2011. *Comments should include Permit Number IN0000094.*

Mail to:

Nicole Gardner
IDEM, Office of Water Quality
MC 65-42 IGCN 1255
100 N Senate Ave
Indianapolis, IN 46204-2251

E-mail to:

ngardner@idem.IN.gov

Public hearing:

As part of the public participation process, IDEM will hold a formal Public Hearing on this Draft NPDES Permit at 6 p.m. (local time) on Thursday, September 15, 2011 at **Ivy Tech Community College-Gary Campus, in the Multipurpose Room (North Building), located at 1440 East 35th Avenue, Gary, Indiana.** The Public Hearing will provide an opportunity for interested parties and IDEM staff to discuss the NPDES permit. Citizens will also have an opportunity during the IDEM Public Hearing to submit written comments and make formal oral statements concerning the draft permit. A court reporter will be present at the IDEM Public Hearing to assure oral statements are documented, as they will be considered part of the official record.

Final permit decision:

When IDEM's Office of Water Quality takes final action relating to the permit, it will mail a Notice of Decision to individuals who have submitted comments or requested to receive notification. Individuals who do not wish to submit comments but wish to receive notification should submit their name and address to IDEM with a request to be placed on the permit mailing list.

5) Permit renewal conditions

All NPDES permits contain five general sections: the Cover Page (with the name and location of the permittee, a statement authorizing the discharge, and the specific locations for which a discharge is authorized); Effluent Limits (information about how discharges of pollutants will be controlled); Monitoring and Reporting Requirements; Special Conditions (such as best management practices (BMPs), additional monitoring activities, and surveys or evaluations of the receiving waters); and Standard Conditions (pre-established conditions that apply to all NPDES permits).

Following is additional information about the draft permit documents for ArcelorMittal Indiana Harbor East.

About the permit application:

The existing NPDES permit for this facility expired on May 31, 2001. IDEM received a renewal application from ArcelorMittal Indiana Harbor East in April 2001, with supplemental information being submitted in 2007, 2009, and 2010. As this renewal application was submitted to the agency in a timely manner prior to the expiration date of the permit, the permit was administratively extended in accordance with 327 IAC 5-2-6(b). A five year permit renewal is proposed.

Facility description:

ArcelorMittal Steel USA Inc. – Indiana Harbor East facility is an integrated iron/steel manufacturing facility. The industrial processes conducted at this facility include the manufacture of iron, the manufacture of steel, rolling mill operations, and finishing operations. In addition to the steel manufacturing processes, there are additional support operations that include power generation, wastewater treatment, recycling, laboratory, and research. The facility has an average discharge of approximately 112 million gallons per day (MGD) and has been given a Class D industrial wastewater treatment plant classification in accordance with 327 IAC 5-22. ArcelorMittal Indiana Harbor East has three point source discharges (emergency overflows and storm water) to the Indiana Harbor Ship Canal, four point source discharges (treated process, non process, and storm water) to the Indiana Harbor Turning Basin, and one point source discharge (non process and storm water) to the unnamed tributary to the Grand Calumet River.

A complete listing and description of the wastewater and discharge outfall points are detailed in the technical fact sheet.

Receiving water and use classification:

The East Branch Grand Calumet River, Indiana Harbor Canal, and Indiana Harbor are designated for full-body contact recreation and shall be capable of supporting a well-balanced, warm water aquatic community. The Indiana Harbor is designated as an industrial water supply. The Indiana portion of the open waters of Lake Michigan is designated for full-body contact recreation; shall be capable of supporting a well-balanced warm water aquatic

community; is designated as salmonid waters and shall be capable of supporting a salmonid fishery; is designated as a public water supply; is designated as an industrial water supply; and, is designated as an outstanding state resource water. These waterbodies are identified as waters of the state within the Great Lakes system. As such, they are subject to the water quality standards and associated implementation procedures specific to Great Lakes system dischargers as found in 327 IAC 2-1.5, 327 IAC 5-1.5, and 327 IAC 5-2.

Section 303(d) of the Clean Water Act requires states to identify waters, through their Section 305(b) water quality assessments, that do not or are not expected to meet applicable water quality standards with federal technology based standards alone. States are also required to develop a priority ranking for these waters taking into account the severity of the pollution and the designated uses of the waters. Once this listing and ranking of impaired waters is completed, the states are required to develop [Total Maximum Daily Loads \(TMDLs\)](#) for these waters in order to achieve compliance with the water quality standards. Indiana's 2010 303(d) List of Impaired Waters was developed in accordance with Indiana's Water Quality Assessment and 303(d) Listing Methodology for Waterbody Impairments and TMDL Development for the 2010 Cycle. As of the 2010 303(d) List of Impaired Waters, the following impairments were listed for waters to which the permittee discharges:

Assessment Unit	Waterbody	Impairments	ArcelorMittal East Outfalls
INK0346_04	East Branch Grand Calumet River	Impaired Biotic Communities, Oil and Grease, <i>E. coli</i> and PCBs in Fish Tissue	019 (Discharge to Unnamed Tributary)
INC0163_T1001	Indiana Harbor Canal	Impaired Biotic Communities, Oil and Grease, <i>E. coli</i> and PCBs in Fish Tissue	007
INC0163G_G1078	Indiana Harbor	Free Cyanide, Mercury in Fish Tissue and PCBs in Fish Tissue	011, 014 and 018
INM00G1000_00	Lake Michigan	Mercury in Fish Tissue and PCBs in Fish Tissue	None

The permittee discharges to a waterbody that has been identified as a Water of the State within the Great Lakes system and that is a tributary to an outstanding state resource water (OSRW). In addition to OSRW antidegradation implementation procedures under 327 IAC 5-2-11.7, it is subject to other NPDES requirements specific to Great Lakes system dischargers under 327 IAC 2-1.5 and 327 IAC 5-2-11.2 through 327 IAC 5-2-11.6. These rules address water quality standards applicable to dischargers within the Great Lakes system and reasonable potential to exceed water quality standards procedures.

As required by 327 IAC 5-2-11.3(b)(2), Part II.A.16. of the renewal permit specifically prohibits the permittee from undertaking deliberate actions that would result in new or increased discharges of bioaccumulative chemicals of concern (BCCs) or new or increased permit limits for non-BCCs, or from allowing a new or increased discharge of a BCC from an existing or proposed industrial user, without first proving that the new or increased discharge would not result in a significant lowering of water quality, or by submission and approval of an antidegradation demonstration to IDEM.

Wastewater Sources and Treatment by Outfall:

Outfall 003 discharges to the Indiana Harbor Ship Canal

Outfall 003 is the emergency overflow from the process wastewater treatment and Plant Recycle System tributary to Outfall 014. There is normally no discharge from this outfall.

Outfall 007 discharges to the Indiana Harbor Ship Canal

Outfall 007 is a storm water outfall. There is also a low volume discharge from ground water infiltration. Outfall 007 is a 48-inch opening with a V-notch weir.

Outfall 008 discharges to the Indiana Harbor Ship Canal

There is normally no discharge from this outfall. As currently configured, any discharges would be the result of emergency overflows of non-contact cooling water, boiler blowdown, and zeolite backwash from the No. 2 AC power station.

Outfall 011 discharges to the Indiana Harbor Turning Basin

The discharge from Outfall 011 includes non-contact cooling water from Blast Furnaces 5 and 6, the No. 2 AC Power Station, and the Sinter plant; boiler blow down from the No. 2 AC Power Station and zeolite rinse water; and some storm water run-off. Non-contact cooling water is chlorinated and de-chlorinated prior to discharge whenever intake water temperature is above 55 °F.

Outfall 013 discharges to the Indiana Harbor Turning Basin

This outfall is an emergency overflow from the Terminal Treatment Plant – West, which is part of the Plant Recycle System tributary to Outfall 014.

Outfall 014 discharges to the Indiana Harbor Turning Basin

The discharge from Outfall 014 is comprised of the blow down from the Main Plant Recycle System. The system includes process and cooling water from hot forming operations (80" hot strip mill); pickling operations (Nos. 4 and 5 pickle lines, continuous anneal line); cold rolling mills (56" and 80" tandem mills; Nos. 27, 28, and 29 temper mills); alkaline cleaning lines; hot coating lines (No. 5 hot dip galvanizing line); the No. 2 Steel Plant (i.e. BOF); Nos. 5 and 6 blast furnaces; the No. 2 continuous caster; treated sanitary wastewaters (Nos. 1, 2, and 3 sewage treatment plants); and storm water run-off.

The No. 1 Sewage Treatment Plant (STP) treats waste from the locker rooms at the No. 2 Steel Plant and Casters. Treatment consists of equalization in a settling chamber, an Imhoff tank, trickling filters, secondary clarifiers, and disinfection prior to discharge into the Main Plant Recycle System. The No. 1 STP has the capability to treat up to 2.6 MGD but historical flows are approximately 1.4 MGD.

The No. 2 Sewage Treatment Plant (STP) treats waste from the locker rooms at the No. 3 Cold Strip Mill. Treatment consists of settling chambers, trickling filter, secondary clarifier, and disinfection prior to discharge into the Terminal Treatment Plant North Lagoon. The No. 2 STP has the capability to treat up to 1.6 MGD but historical flows are approximately 0.5 MGD.

The No. 3 Sewage Treatment Plant (STP) treats waste from the locker rooms at Pugh Ladle Repair, the Lime Plant, and the No. 4 Steel Plant and Caster. Treatment consists of a clarifier/digester, settling chamber, trickling filter, secondary clarifier, and disinfection prior to discharge into the Main Plant Recycle System. The No.3 STP has the capability to treat up to 2.2 MGD but historical flows are approximately 0.46 MGD.

ArcelorMittal Steel operates three terminal treatment plants (North, East, and West) as part of the main wastewater recycle system. The terminal treatment plants are described below.

Terminal Treatment Plant North (TTPN):

TTPN is comprised of a settling basin, a cooling tower, and a pump station located at the north end of the cold strip mill. The discharge from TTPN is recycled directly back to the mill as process and cooling water. TTPN receives process and cooling water from the finishing end of the No. 3 Cold Strip. Emergency overflow from TTPN is directed to a storm water retention basin, from which there is no discharge to surface waters.

Terminal Treatment Plant East (TTPE):

TTPE consists of two scalping tanks and three basins equipped with oil skimmers and a cooling tower. All the effluent from TTPE is discharged to No. 1 and No. 6 Pump Houses and is then recycled back to the mills as process and cooling water. The following mills discharge to TTPE:

The 80" hot strip mill is equipped with four scale pits and four large diameter clarifiers for preliminary removal of heavy solids and oil prior to discharge to the TTPE scale pits.

No. 3 cold strip mill process wastewaters (cold rolling, alkaline cleaning, and hot coating lines) are treated in a clarifier and a dissolved air flotation unit to remove emulsified oils and then are combined with 80" hot strip mill wastewater for additional treatment in large diameter clarifiers prior to discharge to the TTPE scale pits.

Pickling rinse water from the Nos. 4 and 5 pickle lines are neutralized with caustic at the No. 3 cold strip neutralization facility prior to discharge to the TTPE scale pits. Rinse water from the CAL line discharges directly to the TTPE scale pits.

Solids from the scale pits and settling basins are removed by either dragouts or clam shell buckets. They are passively dewatered and most are returned to the process via the Sinter Plant. Solids that cannot be used in the Sinter Plant and underflow from the clarifiers are solidified using lime fines or other appropriate material for off-site disposal.

Terminal Treatment Plant West (TTPW):

TTPW consists of two scalping tanks and two settling basins equipped with oil skimmers and a cooling tower. Most of the effluent from the TTPW is discharged to the No. 1 and No. 6 Pump Houses and is then recycled back to the mills as process and cooling water. The remaining water is the only blow down from the Main Plant Recycle System and constitutes the discharge from Outfall 014.

Wastewaters from the Plant 1 coating lines are treated in scale pits for preliminary removal of heavy solids and oil prior to discharge to the TTPW scalping tanks.

Gas cleaning waters from the No. 2 Steel Plant (BOF) are treated in thickeners for solids removal and recycled back to the No. 2 Steel Plant scrubbers. A small blow down from the scrubber system is treated in a blow down clarifier prior to discharge to the TTPW.

The No. 3 continuous caster has a closed loop cooling water system for mold and machine cooling and a separate treatment and recycle system for spray water consisting of a roughing pit, scale pit with oil removal, and high rate multi-media filtration followed by a cooling tower. Filter backwash is solidified using lime fines or other appropriate material for off-site disposal. The caster recycle system blows down a small amount of filtered water to the TTWP.

Treated blow down from the No. 5 and 6 blast furnace scrubbing system is discharged to the TTWP via internal Outfall 613. The process water and blow down treatment are described under Outfall 613.

Clamshell buckets are used to remove solids from scale pits and settling basins. The solids are passively dewatered and most are returned to the process via the Sinter Plant. Solids that cannot be used in the Sinter Plant are solidified using lime fines or other appropriate material for off-site disposal. Sludge from the No. 2 steel plant thickeners and blow down clarifier is dewatered in a recessed chamber filter press. Filtrate is returned to the thickeners and dry filter cake is either recycled back to the process through the briquetting plant or disposed of off-site.

Internal Outfall 613 discharges to Indiana Harbor Turning Basin via Outfall 014

The gas cleaning and cooling system at Nos. 5 and 6 blast furnaces is a high rate process water recycle system that supplies water to clean and cool blast furnace gas in a venturi scrubber, gas cooler, and high pressure Bischoff scrubber. The system blows down a small amount of water to a blow down treatment facility that discharges to the TTPW via internal Outfall 613.

Gas cleaning and cooling water for the No. 5 and 6 blast furnaces is treated in large diameter thickeners and settling basins for solids removal and recycled directly back to the blast furnace venturi gas scrubbers and gas cooler. The thickener underflow is dewatered in a recessed chamber filter press. Filtrate is returned to the thickeners and dry cake is returned to the process via the briquetting plant.

The blow down from the Nos. 5 and 6 blast furnace recycle system is treated through clarifiers for solids removal and carbon filtration to control phenols and is then discharged to the Main Plant Recycle System through internal Outfall 613.

Outfall 018 discharges to the Indiana Harbor Turning Basin

The discharge from Outfall 018 is comprised of non-contact cooling water; treated effluents from the No. 4 Steel Plant (BOF), vacuum degasser (RHOB), and No. 1 continuous caster (internal Outfall 618); treated effluents from the No. 7 blast furnace gas scrubber system, (internal Outfall 518); cooling tower blow down and low-volume wastes from the No. 5 boilerhouse/North Lake Energy (No. 7 Turbine) and the Coke Energy co-generating facility; storm water run-off; and storm water run-off from the Indiana Harbor Coke Company.

Non-contact cooling water is chlorinated and de-chlorinated prior to discharge when intake water temperature is above 40° F for zebra and quagga mussel control.

Low volume waste sources from No. 5 boilerhouse/North Lake Energy, and CokeEnergy are defined at 40 CFR 423.11(b) and are comprised primarily of water softener regeneration, rinse water, and boiler blow down, and reverse osmosis reject water.

Process water and blow down treatment for the No. 4 Steel Plant (BOF), vacuum degasser (RHOB), and No. 1 continuous caster is described under Outfall 618. Process water and blow down treatment for the No. 7 Blast Furnace is described under Outfall 518.

Internal Outfall 518 discharges to the Indiana Harbor Turning Basin via Outfall 018

Outfall 518 is the internal outfall for the No. 7 Blast Furnace gas scrubbing system. Treated waste waters are limited and monitored prior to mixing with non-contact cooling water and discharged to the Indiana Harbor via Outfall 018.

The gas cleaning system for the No. 7 blast furnace is a high rate process water recycle system that supplies water to clean the blast furnace off-gas through a high energy gas scrubber. Dirty water from the gas scrubber is treated through two large diameter thickeners and a cooling tower and then recycled back to the scrubber. Blow down from the scrubber system is sent to the No. 7 blast furnace slag granulation system. The thickener underflow is dewatered in a recessed chamber filter press. Filtrate is returned to the thickeners and dry cake is sent off-site for disposal.

Excess water from the No. 7 slag granulation system is sent to the No. 7 blast furnace blow down treatment plant, which consists of pH adjustment, cyanide precipitation, and alkaline chlorination. The discharge from the No. 7 blast furnace blow down treatment system constitutes internal Outfall 518.

Internal Outfall 618 discharges to the Indiana Harbor Turning Basin via Outfall 018

Outfall 618 is the internal outfall for the No. 4 Steel Plant (BOF), the vacuum degasser (RHOB), and the No. 1 continuous caster process water systems. Treated wastewaters are limited and monitored prior to mixing with non-contact cooling water and discharged to the Indiana Harbor via Outfall 018.

The gas cleaning system for the No. 4 Steel Plant (BOF) is a high rate process water recycle system that supplies water to clean BOF off-gas through four venturi scrubbers. Gas cleaning water is treated in large diameter thickeners for solids removal and most of the water is returned directly back to the venturi scrubbers. The remainder of the water is blown down to the No. 4 Steel Plant blow down filtration facility for treatment prior to discharge to internal Outfall 618. The thickener underflow is dewatered in a recessed chamber filter press. Filtrate is returned to the thickeners and dry cake is returned to the steel making process via the briquetting plant or disposed of off-site.

The RHOB water system is a high rate process water recycle system that supplies cooling water to the vacuum degasser barometric condensers. Discharge from the condensers returns to a cooling tower and is then recycled back to the condensers. A side stream of water is treated through two inclined plate separators for solids removal and then returned to the system. The underflow from the separators is discharged to the No. 4 Steel Plant thickeners. This is the only blow down from the RHOB water treatment system.

The No. 1 continuous caster water system is a high rate recycle system that supplies water to the caster and scarfer for machine cooling sprays, roll cooling, scale breaking, and flume flushing. A separate system for machine and mold cooling consisting of a non-contact cooling tower and heat exchangers blows down to the caster system. Treatment consists of a roughing

pit, a scale pit with oil recovery, high rate multi-media filtration, and a cooling tower. A small amount of water is blown down from the caster system to the No. 4 Steel Plant thickeners. A clamshell bucket is used to remove solids from the roughing and scale pits. The solids are passively dewatered and returned to the process via the Sinter Plant. Filter backwash is stabilized with lime fines or other appropriate material and sent off-site for disposal.

The Steel Plant blow down filtration facility treats the combined blow down from the No. 4 Steel Plant (BOF), the No. 1 continuous caster, and RHOB through high rate multi-media filters prior to discharge from internal Outfall 618. Blow down from the filtration facility is from the overflow of the No. 4 Steel Plant thickeners. Filter backwash is returned to the thickeners and processed with the thickener flow.

Outfall 019 discharges to an unnamed Tributary to the Grand Calumet River

The discharge from Outfall 019 is non-contact cooling water and storm water run-off from ArcelorMittal Steel's research facility located on Columbus Drive. The research center receives water from the City of East Chicago. The outfall discharges to a drainage ditch tributary to the Grand Calumet River.

Water Intake Discharges to Lake Michigan

Intake screen backwash from the Main Intake/ No. 2 Pump House and No. 7 Pump House is returned to Lake Michigan.

Storm Water Only Discharges to the Indiana Harbor Turning Basin and Ship Canal

Storm water discharges from Outfall 007, SW-1, SW-2, SW-3, SW-4, SW-5, SW-6, SW-7, SW-8, SW-9, and SW-10 are regulated by this permit. The receiving water bodies are the Indiana Harbor Turning Basin, and Indiana Harbor Ship Canal.

Effluent limitations rationale – general:

Federal Effluent Guidelines in 40 CFR 420, Iron and Steel Manufacturing Point Source Category, and the Indiana Water Quality Based Effluent Limitations are applicable because the facility is defined as a fully integrated steel mill. According to 40 CFR 122.44 and 327 IAC 5, NPDES permit limits are based on technology-based limitations, where applicable, best professional judgment (BPJ), and Indiana Water Quality-Based Effluent Limitations (WQBELs).

U.S. EPA Effluent Guidelines -- Existing Source Standards

The U.S. EPA has established technology-based effluent guidelines for the Iron and Steel Manufacturing Point Source Category (40 CFR Part 420). Since this is an existing facility, all process wastewater discharges are subject to effluent guidelines identified in 40 CFR 420.

Indiana Water Quality Based Effluent Limits (WQBELs)

The water quality-based effluent limitations for this facility are based on water quality criteria in 327 IAC 2-1.5 and implementation procedures in 327 IAC 5-2. Limitations and/or monitoring are required for parameters identified by applications of the reasonable potential to exceed WQBEL under 327 IAC 5-2-11.5.

Narrative Water Quality Based Limits

The narrative water quality contained under 327 IAC 2-1.5-8(a) have been included in this permit to ensure that the narrative water quality criteria are met.

Numeric Water Quality Based Limits

The numeric water quality criteria and values contained in this permit have been calculated using the tables of water quality criteria 327 IAC 2-1.5-8.

Effluent limitations by outfall:**Outfalls 003 and 013**

**Table 1 Final Limits
Proposed Effluent Limitations and Monitoring Requirements for Outfalls 003 and 013**

Parameter	Sample Frequency	Sample Type	Concentration mg/l		Mass (lb/d)	
			Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow	[1]	24 Hr. Total	----	----	Report	Report
TSS	[1]	Grab	Report	Report	Report	Report
Oil and Grease	[1]	Grab	Report	Report	Report	Report
Lead	[1]	Grab	Report	Report	Report	Report
Zinc	[1]	Grab	Report	Report	Report	Report
Naphthalene	[1]	Grab	Report	Report	Report	Report
TCE	[1]	Grab	Report	Report	Report	Report
Ammonia (as N)	[1]	Grab	Report	Report	Report	Report
Phenols (4AAP)	[1]	Grab	Report	Report	Report	Report
Free Cyanide	[1]	Grab	Report	Report	Report	Report
pH[2]	[1]	Grab	----	----	----	----

[1] Discharge from Outfall 003 shall be monitored by grab samples collected every 4 hours when an emergency overflow occurs. When monitoring is required, the permittee shall monitor and report the discharge from Outfall 003 on a daily basis.

[2] pH limitations are 6.0 standard units (daily minimum) and 9.0 standard units (daily maximum).

Outfall 008

**Table 2 Final Limits
Proposed Effluent Limitations and Monitoring Requirements for Outfall 008**

Parameter	Sample Frequency	Sample Type	Concentration mg/l		Mass (lb/d)	
			Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow	[1]	24 Hr. Total	----	----	Report	Report
Oil and Grease	[1]	Grab	Report	Report	Report	Report
Ammonia as N	[1]	Grab	Report	Report	Report	Report
Lead	[1]	Grab	Report	Report	Report	Report
Zinc	[1]	Grab	Report	Report	Report	Report
Free Cyanide	[1]	Grab	Report	Report	Report	Report
Phenols (4AAP)	[1]	Grab	Report	Report	Report	Report

Temperature [2]	[1]	Grab	Report	Report	----	----
Thermal Discharge	[1]	Report	----	----	Report (MBtu/hr)	Report (MBtu/hr)
TRC	[1]	Grab	Report	Report	Report	Report
pH[3]	[1]	Grab	----	----	----	----

[1] Discharge from Outfall 008 shall be monitored when an emergency overflow occurs. When monitoring is required, the permittee shall monitor and report the discharge from Outfall 008 on a daily basis.

[2] Intake and Effluent temperature shall be reported in °F.

[3] pH limitations are 6.0 standard units (daily minimum) and 9.0 standard units (daily maximum).

Outfall 011

Table 3 Final Limits
Proposed Effluent Limitations and Monitoring Requirements for Outfall 011

Parameter	Sample Frequency	Sample Type	Concentration mg/l		Mass (lb/d)	
			Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow	1 X Day	24 Hr. Total	----	----	Report	Report
Oil & Grease	1 X Week	Grab	----	Report	----	Report
Ammonia (as N)	1 X Month	24 Hr. Composite	----	Report	----	Report
Lead	1 X Month	24 Hr. Composite	----	Report	----	Report
Zinc	1 X Month	24 Hr. Composite	----	Report	----	Report
Phenols (4AAP)	1 X Month	Grab	----	Report	----	Report
Mercury [1]	6 X Year	Grab	1.3×10^6	3.2×10^6	0.00092	0.0023
Temperature [2]	2 X Week	Grab	Report	Report	----	----
Thermal Discharge	2 X Week	Report	----	----	Report	Report
TRC	5 X Week	Grab	0.012	0.027	8.5	19[4]
pH [3]	1 X Week	Grab	----	----	----	----

[1] Schedule of Compliance (54 Month)

[2] Effluent and Intake shall be reported in °F.

[3] pH limitations are 6.0 standard units (daily minimum) and 9.0 standard units (daily maximum)

[4] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 42.4 lbs/day.

Outfall 014

Table 4 Final Limits
Proposed Effluent Limitations and Monitoring Requirements for Internal Monitoring
Location 014

Parameter	Sample Frequency	Sample Type	Concentration mg/l		Mass (lb/d)	
			Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow	1 X Day	24 Hr. Total	----	----	Report	Report
TSS	3 X Week	24 Hr. Composite	Report	Report	6620	17092
Oil & Grease	3 X Week	2 Grab/24 Hrs.	10[7]	15[7]	1553[9]	4568[8]
Ammonia (as N)	3 X Week	24 Hr. Composite	Report	Report	Report	Report
Total Cyanide	3 X Week	Grab	Report	Report	7.38	17.14
Free Cyanide	3 X Week	Grab	Report	Report	Report	Report
Phenols (4AAP)	3 X Week	Grab	Report	Report	Report	Report
Lead	3 X Week	24 Hr. Composite	61	120	5.9	12
Zinc	3 X Week	24 Hr. Composite	Report	Report	14.91	35[7]
Naphthalene	3 X Month	24 Hr. Composite	----	Report	----	1.80
TCE	3 X Month	Grab	----	Report	----	2.69
Mercury [1]	6 X Year	Grab	1.3×10^6	3.2×10^6	0.00012	0.00031
TRC	5 X Week	Grab	0.013	0.030	1.2	2.9[3]
Temperature [4]	2 X Week	Grab	Report	Report	----	----
Thermal Discharge	2 X Week	Report	----	----	Report	Report
Biomonitoring	[2]	----	----	----	----	----
pH [5]	2 X Week	Grab	----	----	----	----

[1] Schedule of Compliance (54 Month)

[2] Monthly for three consecutive months, if no toxicity demonstrated, frequency can be reduced to 1 X Quarter for the duration of the permit.

[3] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 5.75 lbs/day.

[4] Effluent and Intake shall be reported in °F.

[5] pH limitations are 6.0 standard units (daily minimum) and 9.0 standard units (daily maximum)

Outfall 613

Table 5 Final Limits
Proposed Effluent Limitations and Monitoring Requirements for Internal Monitoring
Location 613

Parameter	Sample Frequency	Sample Type	Concentration ug/l		Mass (lb/d)	
			Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow	2 X Week	24 Hr. Total	----	----	Report	Report
TSS	1 X Month	24 Hr. Composite	Report	Report	Report	Report
Ammonia (as N)	2 X Week	24 Hr. Composite	Report	Report	100	300
Total Cyanide	2 X Week	Grab	Report	Report	8.73	17.41
Phenols (4AAP)	2 X Week	Grab	Report	Report	0.32	0.64
Lead	1 X Month	24 Hr. Composite	Report	Report	Report	Report
Zinc	1 X Month	24 Hr. Composite	Report	Report	Report	Report

Outfall 018

Table 6 Final Limits
Proposed Effluent Limitations and Monitoring Requirements for Storm water Outfall 018

Parameter	Sample Frequency	Sample Type	Concentration mg/l		Mass (lb/d)	
			Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow	1 X Day	24 Hr. Total	----	----	Report	Report
Oil & Grease	1 X Week	Grab	----	Report	----	----
Free Cyanide	2 X Week	Grab	Report	Report	Report	Report
Ammonia (as N)	2 X Week	24 Hr. Composite	Report	Report	Report	Report
Phenols (4AAP)	2 X Week	Grab	Report	Report	Report	Report
Lead [1]	2 X Week	24 Hr. Composite	0.038	0.077	5.0	10
Zinc[1]	2 X Week	24 Hr. Composite	0.180	0.360	24	48
Mercury [1]	6 X Year	Grab	1.3×10^6	3.2×10^6	0.00017	0.00042
TRC	5 X Week	Grab	0.013	0.030	1.7	4.0 [3]
Temperature [4]	2 X Week	Grab	Report	Report	----	----
Thermal Discharge	2 X Week	Report	----	----	Report	Report
Selenium	2 X Month	24 Hr. Composite	Report	Report	Report	Report
Biomonitoring	[2]	----	----	----	----	----
pH [5]	1 X Day	Continuous	----	----	----	----

[1] Schedule of Compliance (54 Month)

[2] Monthly for three consecutive months, if no toxicity demonstrated, frequency can be reduced to 1 X Quarter for the duration of the permit.

[3] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 7.96 lbs/day.

[4] Effluent and Intake shall be reported in °F.

[5] pH limitations are 6.0 standard units (daily minimum) and 9.0 standard units (daily maximum)

Outfall 518

Table 7 Final Limits
Proposed Effluent Limitations and Monitoring Requirements for Internal Monitoring
Location 518

Parameter	Sample Frequency	Sample Type	Concentration ug/l		Mass (lb/d)	
			Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow	1 X Day	24 Hr. Total	----	----	Report	Report
TSS	2 X Week	24 Hr. Composite	Report	Report	91.24	243.71
Oil & Grease	2 X Week	Grab	----	Report	----	60.82
Ammonia (as N)	2 X Week	24 Hr. Composite	Report	Report	60.82	182.47
Total Cyanide	2 X Week	Grab	Report	Report	6.08	12.16
Phenols (4AAP)	2 X Week	Grab	Report	Report	0.61	1.22
Lead	2 X Week	24 Hr. Composite	Report	Report	1.32	2.28
Zinc	2 X Week	24 Hr. Composite	Report	Report	2.73	8.21
TRC	2 X Week	Grab	----	Report	----	3.04
Selenium	1 X Week	24 Hr. Composite	Report	Report	Report	Report

Outfall 618

Table 8 Final Limits
Proposed Effluent Limitations and Monitoring Requirements for Internal Monitoring
Location 618

Parameter	Sample Frequency	Sample Type	Concentration ug/l		Mass (lb/d)	
			Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow	2 X Week	24 Hr. Total	----	----	Report	Report
TSS	2 X Week	24 Hr. Composite	Report	Report	360	720
Oil & Grease	2 X Week	2 Grabs/24 Hrs.	Report	Report	102	216
Lead	2 X Week	24 Hr. Composite	Report	Report	2.16	6.48
Zinc	2 X Week	24 Hr. Composite	Report	Report	3.50	10.50

Outfall 019

Table 9 Final Limits
Proposed Effluent Limitations and Monitoring Requirements for Storm water Outfall 019

Parameter	Sample Frequency	Sample Type	Concentration mg/l		Mass (lb/d)	
			Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow	1 X Month	24 Hr. Total	----	----	Report	Report
TSS	1 X Month	Grab	----	Report	----	----
Oil & Grease	1 X Month	Grab	----	Report	----	----
TRC[1]	1 X Month	Grab	0.010	0.020	0.0083	0.017 [2]
pH [3]	1 X Month	Grab	----	----	----	----

[1] Schedule of Compliance (12 Month)

[2] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 0.05 lbs/day.

[3] pH limitations are 6.0 standard units (daily minimum) and 9.0 standard units (daily maximum).

Schedule of compliance for the new effluent limitations for mercury, lead and zinc:

The Reasonable Potential to exceed water quality based effluent limits analysis identified Mercury in the effluent from Outfalls 011, 014, and 018, and Lead and Zinc in the effluent from Outfall 018 have the potential to exceed the final effluent limitations in the permit. Based on the available data, the Indiana Harbor East facility may not be able to assure 100% compliance with the new WQBEL effluent limits for Mercury, Lead, and Zinc at the time the renewal NPDES permit is issued. Therefore, the proposed permit is eligible to contain a schedule of compliance for the new water quality-based effluent limitations for Mercury at Outfalls 011, 014, and 018, and Lead and Zinc at Outfall 018. The schedule of compliance requires ArcelorMittal to develop a plan to identify the sources of Mercury, Lead, and Zinc in the wastewater being treated and to develop a plan to achieve compliance with the final effluent limits and implement the plan within 24 months after the plan to collect data and information regarding pollution prevention and treatment has been approved.

The compliance schedule regarding the final effluent limits for Mercury, Lead, and Zinc requires the permittee to achieve compliance with the effluent limitations specified for Mercury, Lead, and Zinc at Outfalls 011, 014, and 018 as soon as possible but no later than fifty-four (54) months from the effective date of this permit. See the Fact Sheet or Permit for more details about the Schedule of Compliance for these pollutants.

Thermal requirements:

The Indiana Harbor Canal and Indiana Harbor shall be capable of supporting a well-balanced, warm water aquatic community. The water quality criteria for temperature applicable to these waterbodies are included in 327 IAC 2-1.5-8(c). Temperature was not a pollutant of initial focus in the Water Quality Guidance for the Great Lakes system under 40 CFR Part 132. Therefore, Indiana was allowed to apply its own temperature criteria to waters within the Great Lakes system when the rules were last revised in 1997 as part of the Great Lakes rulemaking. During

this rulemaking, the monthly maximum temperature criteria that were updated in 1990 were retained. Indiana regulations state that the temperature criteria apply outside a mixing zone, but the allowable mixing zone is not established in the rules. IDEM current practice is to allow fifty percent (50%) of the stream flow for mixing to meet temperature criteria.

The implementation procedures under 327 IAC 5-2-11.4 for developing wasteload allocations for point source discharges address temperature under 5-2-11.4(d)(3). This provision states that temperature shall be addressed using a model, approved by the commissioner, that ensures compliance with the water quality criteria for temperature. There is also no specific procedure in the rules for determining whether a discharger is required to have water quality-based effluent limits (WQBELs) for temperature. Therefore, the general provision for making reasonable potential determinations in 5-2-11.5(a) is applicable. This provision establishes that if the commissioner determines that a pollutant or pollutant parameter is or may be discharged into the Great Lakes system at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable narrative or numeric water quality criterion under 2-1.5, the commissioner shall incorporate WQBELs in an NPDES permit that will ensure compliance with the criterion. In making this determination, the commissioner shall exercise best professional judgment, taking into account the source and nature of the discharge, existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, and, where appropriate, the dilution of the effluent in the receiving water. The commissioner shall use any valid, relevant, representative information pertaining to the discharge of the pollutant.

The multi-discharger model for the Indiana Harbor Canal/Lake George Canal/Indiana Harbor subwatershed discussed above included five active outfalls discharging to the Indiana Harbor Canal and four active outfalls discharging to the Indiana Harbor that contain a thermal component such as noncontact cooling water or boiler blowdown as a source of wastewater. ArcelorMittal Indiana Harbor East Outfall 011 has a flow of 84.7 mgd consisting mostly of noncontact cooling water; Outfall 014 has a flow of 11.5 mgd with Internal Outfall 613 having a flow of 0.091 mgd and the remaining consisting of blowdown from the Main Plant Recycle System which includes process and cooling water; Outfall 018 has a flow of 15.9 mgd with Internal Outfall 518 having a flow of 0.044 mgd and Internal Outfall 618 having a flow of 0.57 mgd with the remaining discharge including various thermal discharges such as noncontact cooling water, boiler blowdown and cooling tower blowdown. The ArcelorMittal East 1996 permit includes temperature monitoring and the reporting of thermal discharge based on the intake and outfall temperatures. The source of cooling water for Outfalls 011 and 014 is the Main Intake on Lake Michigan and the source of cooling water for Outfall 018 is the No. 7 Pump House on Lake Michigan. Effluent temperature data reported for the period January 1998 through December 2010 were reviewed. The data for Outfall 011 follow a seasonal pattern with a maximum recorded temperature of 89.2 °F in September 1998. The data for Outfall 014 follow a seasonal pattern, but with relatively higher temperatures than the other ArcelorMittal East outfalls, with a maximum recorded temperature of 90.6 °F in July 2006. The data for Outfall 018 follow a seasonal pattern with a maximum recorded temperature, after the shutdown of the No. 4 AC power station, of 84.8 °F in August 2001.

The multi-discharger model accounted for the intrusion of lake water into the Indiana Harbor and Indiana Harbor Canal. The intrusion of lake water produces thermal stratification that ends at the railroad bridge about 0.7 miles upstream of the mouth of the Indiana Harbor Canal. The ArcelorMittal Indiana Harbor Long Carbon outfall on the east side of the canal and two ArcelorMittal outfalls on the west side of the canal are upstream of the railroad bridge. ArcelorMittal West (IN0000205) Outfalls 009 and 010, which are two large sources of non-contact cooling water, are the first two discharges downstream of the railroad bridge. As part of a special condition in the ArcelorMittal East 1996 permit, the facility was required to conduct sampling in the Indiana Harbor Canal downstream of Outfall 001 and between Outfalls 008 and

011 and in the Indiana Harbor at a point equal distant from Outfalls 011, 014 and 018. Sampling was to be conducted from April through November for two years and at three river depths (one foot below the surface, mid-depth and one foot above the bottom). The facility conducted the sampling in 1997 and 1998 and submitted a summary of the results of this sampling along with an analysis of the thermal impact of the ArcelorMittal discharges to the Indiana Harbor Canal and Indiana Harbor based on the sampling results in a November 19, 2010 report. The report concluded the following: ArcelorMittal East (IN0000094) and ArcelorMittal West (IN0000205) were both operating at reasonably high production rates in 1997 and 1998 as measured by raw steel production; ambient air temperatures were within normal ranges; there have been no significant changes in the flow regimes in the Indiana Harbor Canal since the study was done; and, the study results demonstrate compliance with applicable temperature criteria.

Additional temperature monitoring at multiple depths was conducted in the Indiana Harbor Canal and Indiana Harbor as part of the July 1999 and April 2000 sampling conducted for the Grand Calumet River TMDL study. The sampling included two locations in the Indiana Harbor (just beyond the lighthouse at the outer edge of the Indiana Harbor and in the middle of the Indiana Harbor, just downstream of ArcelorMittal West (IN0000205) Outfall 011, the last outfall on the Indiana Harbor), two locations in the Indiana Harbor Canal downstream of the railroad bridge (about 0.6 miles downstream of ArcelorMittal West Outfalls 009 and 010 at the mouth of the Indiana Harbor Canal and about 0.3 miles downstream of ArcelorMittal West Outfalls 009 and 010), one location just downstream from Dickey Road and downstream of the three thermal discharges upstream of the railroad bridge and one location just upstream of ArcelorMittal Central WWTP (IN0063711) Outfall 001 which is the ArcelorMittal thermal discharge that is furthest upstream of the railroad bridge. The data showed temperature stratification downstream of the railroad bridge and a decreasing trend in temperature from upstream to downstream. The Indiana Harbor Canal and Indiana Harbor were in compliance with the water quality criteria for temperature. Effluent temperature and flow data were collected during the July 1999 sampling and effluent temperature data were collected during the April 2000 sampling. The TMDL studies were done after the shutdown of the No. 4 AC power station that discharged through ArcelorMittal East Outfall 018 until about May 1999. A review of historical instream temperature data at IDEM fixed stations on the Indiana Harbor Canal and Indiana Harbor from January 1990 through December 2010 and the fixed station on Lake Michigan from January 1997 through December 2010 shows that the maximum temperature values were recorded in July 1999. The average stream flow during the July 1999 temperature monitoring as recorded at USGS gaging station 04092750 in the Indiana Harbor Canal at Canal Street was 485 cubic feet per second (cfs) which is close to the Q7,10 of 352 cfs. Therefore, the July 1999 temperature monitoring was done during a period that is very close to critical stream conditions.

In addition to the instream sampling, a multi-discharger model was used to assist in the reasonable potential analysis. The multi-discharger model for toxics discussed above was modified to account for temperature. The mixing zone was set at fifty percent (50%) of the stream flow to be consistent with current IDEM practice for mixing zones for temperature. The model does not account for heat dissipation so it represents a conservative, dilution only analysis. The effluent and instream data collected in July 1999 and April 2000 as part of the Grand Calumet River TMDL study were used as inputs to the model to determine if the model could predict the measured instream temperatures. The model predicts an increase in temperature downstream of the railroad bridge beginning with ArcelorMittal West Outfalls 009 and 010 and no exceedance at the edge of any mixing zones for both July 1999 and April 2000. The July 1999 TMDL data show a large decrease in temperature (about 7 °F) from Dickey Road to downstream of ArcelorMittal West Outfalls 009 and 010 in the upper one-half depth of the temperature stratified river with an even larger decrease in the lower one-half depth. There was essentially no further decrease in temperature in the Indiana Harbor during the sampling. The April 2000 TMDL data show a small decrease (about 0.5 °F) from Dickey Road to downstream

of Outfalls 009 and 010. However, the temperature did decrease to a larger extent in the Indiana Harbor (about 4 °F). The multi-discharger model is therefore a conservative means of determining the impact of the thermal discharges.

A Q7,10 flow of 352 cfs, long-term average effluent flows, except as noted below, and background temperatures from fixed station IHC-3S were used in the multi-discharger thermal model as were used in the multi-discharger toxics model. The effluent temperature input to the model was set equal to the maximum temperature reported for the month during the period January 1998 through December 2010 if it was considered representative data. The maximum temperature for May for ArcelorMittal East Outfall 018 was reported in 2010, but it was not considered representative due to low discharge flows at the plant. The maximum temperature for November for Outfall 018 was reported in 2009, but it was not considered representative due to low discharge flows at the plant. In addition, the January and February data for both 2009 and 2010 were not considered representative due to low discharge flows. The critical peak temperature months of June through September were included as one period since the same maximum criterion of 90 °F applies each month. The effluent flow for ArcelorMittal West Outfall 009 for the June through September period was set equal to the daily maximum flow due to this outfall having the highest effluent temperature and a significant increase in discharge flow during this period. The results of the conservative, dilution only modeling show that the discharges from ArcelorMittal Indiana Harbor East Outfalls 011, 014 and 018 do not have a reasonable potential to cause or contribute to an excursion of the water quality criterion for temperature in the from January through December. Based on the results of the instream sampling and multi-discharger thermal model, the discharges from ArcelorMittal Indiana Harbor East Outfalls 011, 014 and 018 do not have a reasonable potential to exceed a water quality criterion for temperature. Under 5-2-11.5(e), the commissioner may require monitoring for a pollutant of concern even if it is determined that a WQBEL is not required based on a reasonable potential determination. Monitoring for temperature and thermal discharge was continued in the renewal permit.

Thermal Effluent Requirements

The thermal discharge shall be calculated for Outfalls 008, 011, 014, and 018. Such discharge shall be limited and monitored by the permittee as specified below.

- a. Flow and temperature values used in thermal discharge calculations shall be taken from the same day of monitoring.
- b. The thermal discharge shall be computed as follows:

$$\text{Thermal Discharge (MBtu/Hr.)} = Q \times (T_o - T_i) \times 0.3477$$

where,

MBtu/Hr = Million Btu/Hr.
Q = 24 hour discharge flow, MGD
To = effluent temperature, °F
Ti = influent temperature, °F
0.3477 = conversion factor

- c. Temperature shall be monitored as follows at Outfalls 008, 011, 014, and 018:

DISCHARGE LIMITATIONS
(Outfalls 008, 011, 014, and 018)

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Quality or Concentration</u>			<u>Monitoring</u>		<u>Requirements</u>
	<u>Monthly</u>	<u>Average</u>	<u>Daily</u>	<u>Monthly</u>	<u>Daily</u>	<u>Measurement</u>	<u>Sample</u>	<u>Type</u>
			<u>Units</u>	<u>Average</u>	<u>Maximum</u>	<u>Units</u>	<u>Frequency</u>	
Temperature								
Effluent [1]	----	----	----	Report	Report	°F	2 X Week	Grab
Intake [2]	----	----	----	Report	Report	°F	2 X Week	Grab

- [1] Temperature at Outfalls 011, 014, and 018 shall be sampled between the hours of 12 pm and 4 pm. Temperature at Outfall 008 shall be sampled daily whenever discharge occurs.
- [2] On days when temperature is sampled at an outfall, temperature shall also be sampled at the corresponding intake.

Modifications from technology based effluent limitations for ammonia and phenol (301(g) Variance):

Section 301(g) of the Clean Water Act and 327 IAC 5-3-4(b)(2) allow for a variance from the applicable Best Available Technology (BAT) requirements through the development of proposed modified effluent limitations (PMELs) for the non-conventional pollutants of ammonia, chlorine, color, iron, and total phenols (4AAP) provided the following conditions are met:

1. The proposed modified effluent limits (PMELs) will meet the categorical BPT effluent limits (Technology Based Effluent Limits) or applicable water quality based effluent limits (WQBEL), whichever are more stringent;
2. The PMELs will not result in any additional requirements on other point or non-point sources;
3. The PMELs will not interfere with the attainment or maintenance of water quality which will protect public water supplies, aquatic life, and recreational activities; and,
4. The PMELs will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity, or teratogenicity, or synergistic properties).

On February 8, 1989, Inland Steel, former owner of this facility, was granted Section 301(g) variances for ammonia (as N) and phenols (4AAP) for discharges from the No. 2 Coke Plant and No. 11 Coke Battery (Outfalls 012 and 018). The 301(g) variance had been incorporated into the permit through a modification issued October 12, 1988 that became effective December 1, 1988, prior to the permit expiration date of February 28, 1989. The modification included limits for ammonia (as N) and phenols (4AAP) at Outfalls 012 and 018 based on the 301(g) variance that would apply if the variance became effective. In a letter dated July 23, 1993, Inland Steel withdrew the 301(g) variance for ammonia (as N) and phenols (4AAP) for the coke making wastewaters, due to the ability to meet BAT for coke making operations, and requested that a portion of the PMELs for ammonia (as N) for that variance be transferred to Internal Outfall 613 for the Nos. 5 & 6 blast furnaces in the permit renewal. In a letter dated March 28, 1994, Inland Steel also requested that a portion of the PMELs for phenols (4AAP) be transferred to Internal Outfall 613 for the Nos. 5 & 6 blast furnaces. The Nos. 5 & 6 blast furnaces were put

into service in 1939 and 1942, respectively. The draft NPDES permit renewal dated July 14, 1995 that was public noticed July 26, 1995 deleted the variances for ammonia (as N) and phenols (4AAP) previously applicable to the No. 2 coke plant and the No. 11 coke battery (Outfalls 012 and 018) and portions of those PMELs were transferred to Internal Outfall 613 (see Table 7). EPA Region V provided assistance in responding to comments on the draft permit in a letter dated September 29, 1995. A final draft permit dated February 23, 1996 was developed based on process changes and in response to comments on the draft permit. EPA Region V sent a concurrence letter dated March 7, 1996 on the final draft permit stating that IDEM could proceed with the reissuance of the permit. The final permit contained the same permit conditions for ammonia (as N) and phenols (4AAP) at Internal Outfall 613 as the draft permit that was public noticed July 26, 1995. The final permit was issued June 4, 1996 with an effective date of July 1, 1996.

Outfall 613 is an internal NPDES permit compliance monitoring station for process water discharges from the Nos. 5 & 6 blast furnaces. Outfall 613 discharges to the Terminal Treatment Plant West, which in turn, discharges to the Main Plant Recycle System. Outfall 014 discharges a blow down from the Main Plant Recycle System to the Indiana Harbor Turning Basin.

ArcelorMittal requests the above effluent limits for Outfall 613 be continued as 301(g) effluent limits in the renewal NPDES permit. According to the permittee, there have been no changes in ArcelorMittal process operations or changes in Indiana Water Quality Standards or other regulatory programs since the 1996 permit was issued that would materially affect the conditions and circumstances under which the variances were granted initially and continued in the current NPDES permit. The proposed Section 301(g) effluent limits for Ammonia-N and Phenols (4AAP) would not represent an increase in authorized discharges of these compounds over currently permitted levels.

The categorical effluent limitation guidelines for ammonia (as N) and phenols (4AAP) which form the basis for the BPT and BAT effluent limits for discharges from Outfall 613 are found at 40 CFR 420.32(a) and 420.33(a), respectively. The generally applicable BAT and BPT limits have been calculated and are presented in the Table below.

Nos. 5 & 6 Blast Furnaces
BPT, PMELs, BAT, WQBELs

Limits (Outfall)	Ammonia-N (lbs/day)		Phenols (4AAP) (lbs/day)	
	Monthly Avg	Daily Max	Monthly Avg	Daily Max
BPT (613)	590.85	1771.45	23.11	68.88
PMEL (613)	100	300	----	----
BAT (613)	32.13	96.38	0.32	0.64
WQBEL (014)	*340	*670	**7.00	**16.25

*The Ammonia (as N) WQBELs in Table 7 are based on the current applicable water quality criteria. The PMELs for ammonia (as N) are more stringent than the WQBELs for ammonia based on the current applicable water quality criteria.

**The Phenol (4AAP) WQBELs in Table 7 are the current permit limits for Outfall 014. The existing limits originate in the 1996 permit. The monthly average and daily maximum limits were

based on 85% of the combined loadings for Outfalls 012 and 014 in the 1992 IDEM Grand Cal./IHC WLA.

Indiana does not have numerical water quality standards for total phenols (4AAP) applicable to the Indiana Harbor Turning Basin. When the initial 301(g) variance was approved in 1989, IDEM and EPA Region V considered whether any toxic phenols were present in the discharges from Outfalls 012 and 018 (the outfalls included in the original variance requests) at levels that would interfere with attainment of Indiana's water quality standards. The section 301(g) variance for total phenols was initially approved on that basis. The current Indiana water quality standards refer to narrative criteria at Section (c)(1)(A) and (B) to protect aesthetic qualities of taste in food fish and odor in the vicinity of the discharge. There are no numeric criteria for Lake Michigan for total phenols.

Monitoring data for Outfall 014 shows that most of the phenolic compounds were not detected at concentrations greater than 18 µg/l (1.73 lbs/day). Monitoring data for Outfall 613 shows that most of the phenolic compounds were not detected at concentrations greater than 9 µg/l.

IDEM has reviewed ArcelorMittal Indiana Harbor East's request for continuance of the PMELs for ammonia (as N) and phenols (4AAP) based on the 301(g) variances effective in the 1996 permit in the context of Indiana's currently applicable water quality standards and IDEM's procedures for conducting wasteload allocations.

Based upon that review which included the review of effluent data from Internal Outfall 613 for phenols from May 2008 through June 2010, ArcelorMittal has been reporting results that would meet the proposed BAT limits calculated for phenols (4AAP) in the Table above. The treatment system currently in place has been removing phenols at a level where it does not appear the 301(g) variance for phenol (4AAP) that was incorporated into the 1996 permit is required. Therefore, IDEM has made a recommendation to EPA that the variance request for phenol (4AAP) not be continued. IDEM does recommend that the 301(g) variance for ammonia be continued at the level previously approved.

Cooling water intake structure (CWIS):

Section 316(b) of the federal Clean Water Act requires that facilities minimize adverse environmental impact resulting from the operation of cooling water intake structures (CWIS) by using the best technology available (BTA). U.S. EPA has promulgated rules to implement these requirements for new facilities (Phase I rules), large, existing power plants (Phase II rules) which are currently remanded, and offshore oil and gas extraction facilities (Phase III rules), and that implementation must take place through the issuance of NPDES permits. However, there is a large universe of facilities which are not specifically addressed by the rules, including:

New facilities with a CWIS design flow less than 2 MGD;
Existing power plants with a CWIS design flow less than 50 MGD; and
Manufacturing facilities such as existing steel mills, paper mills, etc. with a surface water intake that use at least a portion of their intake flow for cooling purposes.

U.S. EPA has recently emphasized that all of these facilities, including those not specifically addressed by rules must be evaluated for 316(b) compliance. 40 C.F.R. §125.90(b) directs permitting authorities to establish 316(b) requirements on a best professional judgment (BPJ) basis for existing facilities not subject to categorical section 316(b) regulations (Phase I, II (currently remanded) or III rules. IDEM is required to make a BTA determination using BPJ so the permit will comply with the federal regulation.

ArcelorMittal submitted documentation on the design and operation of the CWISs at the Indiana Harbor East facility in November 2008. According to the permittee there have been a number of modifications to intake structures and process flows at the facility. Two electric power generation facilities, No. 3 and No. 4 AC Stations, have been taken out of service; these were large volume cooling water users. The only active remaining pumping stations at the facility that provide cooling water and/or other raw water process needs include the Main Intake, No. 2 Pump House, and No. 7 Pump House.

The No. 6 Pump House, originally designed to withdraw directly from the Main Intake canal, and No. 1 Pump House, originally designed to withdraw just upstream of the Main Intake weir, have both been converted to dedicated closed-loop operation in support of the Master Recycle System (MRS) which was constructed in 1980. Make-up water for the MRS in the southern and northern portions of the facility is provided by No. 2 Pump House and No. 7 Pump House, respectively. However, there is limited connectivity between these two parts of the MRS. The No. 6 Pump House does have a functional make-up water pump configured to draw water directly from the intake canal; however, it is rarely if ever used.

Construction of the MRS in 1980 substantially reduced the demand for raw water withdrawals from Lake Michigan and lessened the mass loading of pollutant discharges to the Indiana Harbor Ship Canal. Subsequently, raw water needs at the Indiana Harbor East facility were further reduced with the shuttering the No. 3 AC Station in the late 1980's and No. 4 AC Station in 1999. With the MRS in place, cooling water intake flows at the Indiana Harbor East facility have been essentially reduced to a level "commensurate with a closed-cycle recirculating cooling water system". Those reduced water withdrawals associated with the MRS-related engineering and operational measures have resulted in a direct and substantial reduction in fish impingement and entrainment from the original CWIS design (dated as far back as 1920).

One Fish Monitoring Study was conducted from June 1976-June 1977 which characterized the physical and biological conditions in the vicinity of the intake structures at that time. During that period there were no closed-loop systems and in addition to the main intake, the facility operated five pump houses each with the potential to impinge/entrain fish. As such the magnitude of the impingement/entrainment reported in the 1976-1977 study is not representative of current conditions. As previously mentioned, since the mid-1970's, the facility has converted a substantial amount of its cooling/process water system to a closed-loop system in support of the Master Recycle System (MRS) and taken some large water volume processes off-line. This reduction in intake flows is significant and has greatly reduced the potential for adverse environmental impact. The following is a summary of the documentation submitted by the permittee for this facility.

No. 7 Pump House

- Lake Michigan source
- The No. 7 Pump House is located in the northeast quadrant of Plant 2 along and parallel to the Lake Michigan shoreline. The pump house was constructed in 1979 to service the large volume once-through cooling needs of the No. 4 AC station and lesser needs of the other production lines. No. 4 AC Station was shuttered in 1999 substantially reducing the volume of water needed from the No. 7 Pump House for facility operations.
- 43 MGD effective design intake capacity
- 86% reduction from original design
- Bar racks present

- 7 “Envirex” brand vertical traveling screens (single entry/exit) in a common wet well. Three screens have been modified to function in a fixed panel mode; all screens are fitted with 3/8” mesh screens.
- 0.17 f/s velocity under normal operating conditions as calculated by the permittee.
- 1.24 f/s total rated capacity velocity as calculated by the permittee
- 1 pump
- Screen wash system used to remove impinged debris and/or fish, which are washed into a common collection trough which runs along the length of the screen structures below floor level. Trough contents are returned to a screened sump/basket and manually discarded.

Main Intake

- Lake Michigan Source
- Positioned at the terminus of an intake canal that extends generally west approximately 1,240 feet from the Lake Michigan shoreline. The intake canal is approximately 338 feet wide, narrowing to about 50 feet wide at the entrance to the pump forebay. When Lake Michigan water levels are lower than needed to support facility operations, pumps lift water from the pump structure forebay over a weir designed to maintain water levels in the cooling/process water systems. The weir has 26 one-way flap gates that actuate when the water behind the weir is lower than lake surface level, thereby allowing water to flow passively into the cooling water system.
- 144 MGD current flow based on current and fixed pump configuration and operation
- 88% reduction in flows from the original design
- Single low lift pump
- Other than a bar rack to capture large debris, the Main Intake is unscreened.
- Velocity could not be calculated by the permittee due to the Intake configuration.
- The Main Intake is the source water for the No. 2 Pump House

No. 2 Pump House

- Main Intake source
- The No. 2 Pump House was originally constructed in the early 1950s superseding the construction of the Master Recycle System. Located internal to the plant near the Turning Basin of the IHSC; No. 2 Pump House withdraws raw water from a constructed forebay within the pump house fed by a 2,809 foot long subterranean tunnel serviced by the Main Intake. Water level in the forebay is maintained by a single low life pump, or via passive flow of Lake Michigan through the Main Intake structure weir flap gates (dependent on lake levels). The No. 2 Pump House services the large volume once-through cooling water needs of the No. 2 AC Station and No. 5 & 6 Blast Furnaces; and lesser volume needs of other production lines in Plant 2 including make-up water to the MRS.
- 115 MGD current flow based on current and fixed pump configuration and operation
- 68% reduction from original design
- 3 pumps (Two circulating water pumps and one service water pump) operate continuously

- Bar racks present
- 5 “Envirex” brand vertical traveling screens (single entry/exit) deployed side by side in a common wet well. Two screens have been modified to function as fixed panel screens; all screens are fitted with 3/8” mesh screens.
- The screens are designed with a screen wash system to remove any impinged debris and/or fish, which are washed into a common collection trough running along the length of the screen structures below floor level. The contents of the trough are returned to a screened sump/basket and manually discarded as necessary.
- 0.81 f/s velocity under normal operating conditions as calculated by the permittee
- 2.51 f/s total rated capacity velocity as calculated by the permittee

Based on an evaluation of the documents and information provided by the ArcelorMittal Indiana Harbor East facility, IDEM has made a BTA determination that the existing CWIS is BTA based on BPJ for the following reasons:

1. There has been a substantial reduction in water intake demand since the original study.
2. There has been a reduction in the number of pumps running simultaneously which is associated with a decrease in intake water demand due to demolition and removal of infrastructure processes, construction of the Master Recycle System, and in conjunction with improvements in iron and steel production technologies.

The permit contains monitoring conditions and reporting requirements to ensure operation of all intakes in a manner that will minimize adverse environmental impact as follows:

1. ArcelorMittal Indiana Harbor East is required to conduct a two year study within one year of the effective date of the permit to further characterize the nature and extent of the environmental impacts from the Cooling Water Intake Structures in a scientifically valid manner. This determination will be reassessed at the next permit reissuance to ensure that the CWIS continues to meet the requirements of Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326). A confirmation study is required to be conducted five years after the initial two year study has been completed.
2. ArcelorMittal shall provide advance notice to IDEM of any proposed changes to the CWISs or proposed changes to operations at the facility that affect the information taken into account in the current BTA evaluation.
3. The discharge of Intake Screen Backwash shall meet the Narrative Water Quality Standards contained in Part I.B. of the permit.
4. Fish returns shall be evaluated for all intakes to determine if they minimize fish mortality. The permittee shall submit to IDEM an evaluation of options to minimize fish mortality within one year from the effective date of the permit. This evaluation should include time frames to implement these measures. The permittee will implement any options that IDEM identifies as BTA after the information becomes available.

Storm water:

According to the 2F application and/or the most recently updated storm water pollution prevention plan (SWP3), updated in 2008, through the use of engineering controls, Outfall 002 no longer discharges to a Water of the State. Additionally, four new drainage areas have been identified; SW-11, SW-12, SW-13, and SW-14, but because these areas only have sheet flow and the drainage is not associated with any industrial activity, they are not regulated in the permit. These locations are included in the SWP3 as a best management practice to ensure that the areas continue to be reviewed and policed.

Table 8

Plant	Outfalls	Drainage Areas
Plant 2	Outfall 007	SW-1, SW-2, SW-3, SW-4, SW-5, SW-6, SW-7, SW-8, SW-9, and SW-10

A review of the current requirements for storm water monitoring is on a semi-annual basis. Part I. E. of the permit details the specific parameters and outfalls where these sampling and monitoring requirements are to be implemented.

U.S. EPA has determined that non-numeric Technology-Based Effluent Limits have been determined to be equal to BPT/BAT/BCT for storm water associated with industrial activity. The Non-Numeric Storm water Conditions and Effluent Limits contain the technology-based effluent limitations. Effective implementation of these requirements should meet the applicable water quality based effluent limitations. The non-numeric requirements of the permit contain effluent limitations, defined in the CWA as restrictions on quantities, rates, and concentrations of constituents which are discharged. Violation of any of these effluent limitations constitutes a violation of the permit.

The technology-based effluent limitations require the permittee to minimize exposure of raw, final, or waste materials to rain, snow, snowmelt, and run-off. In doing so, the permittee is required, to the extent technologically available and economically practicable and achievable, to either locate industrial materials and activities inside or to protect them with storm resistant coverings. In addition, the permittee is required to: (1) use good housekeeping practices to keep exposed areas clean, (2) regularly inspect, test, maintain and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in storm water discharges, (3) minimize the potential for leaks, spills and other releases that may be exposed to storm water and develop plans for effective response to such spills if or when they occur, (4) stabilize exposed area and contain run-off using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants, (5) divert, infiltrate, reuse, contain, or otherwise reduce storm water run-off, to minimize pollutants in your discharges, (6) enclose or cover storage piles of salt or piles containing salt used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces, (7) train all employees who work in areas where industrial materials or activities are exposed to storm water, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your Pollution Prevention Team, (8) ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged, and (9) minimize generation of dust and off-site tracking of raw, final, or waste materials.

To meet the non-numeric effluent limitations in Part I.E.5, the permit requires the permittee to select control measures (including best management practices) to address the selection and design considerations in Part I.E.4.

The permittee must control its discharge as necessary to meet applicable water quality standards. It is expected that compliance with the technology-based effluent limitations and other terms and conditions in this permit will meet this effluent limitation. However, if at any time the permittee, or IDEM, determines that the discharge causes or contributes to an exceedance of applicable water quality standards, the permittee must take corrective actions, and conduct follow-up monitoring.

In addition to the non-numeric effluent limitations, IDEM has implemented a baseline monitoring requirement for specific parameters to demonstrate progress of control measures at the facility. Historic data will be used to determine the baseline concentration for the parameters and subsequent measurements will demonstrate the overall effectiveness of the control measures implemented at the site and will assist the permittee in knowing when additional corrective action(s) may be necessary to comply with the provisions in Part I.E.5 of the permit.

Storm water monitoring data collected during the permit term shall be compared to the baseline concentrations annually to determine if the control measures being implemented at the site result in an improvement from the baseline established by the permittee. If the sample results exceed the baseline concentration, the permittee must take corrective actions in Part I.E.7 of the permit. Follow-up sampling should occur as soon as possible after implementation of corrective actions.

An exceedance of a baseline concentration is not a permit violation. However, failing to take the corrective actions in Part I.E.7 as a result of a baseline concentration exceedance is a violation of the permit. The permittee shall strive for continuous improvement from the baseline until it has been demonstrated that the permittee has implemented the best management practice to meet the provisions in Part I.E.5. of this permit.

Part I.E.6 of the permit was added to require an annual review of the selection, design, installation, and implementation of the control measures to determine if modifications are necessary to meet the effluent limitations in the permit. This annual review will reinforce the continuous improvement of storm water discharges. While this approach is different than U.S. EPA's benchmarking process where a monitoring result exceeding a benchmark triggers the review of the selection, design, installation, and implementation of the control measures, the permittee is required to review the selection, design, installation, and implementation of the control measures annually whether or not the monitoring results exceed a baseline concentration. Failing to conduct the annual review of the selection, design, installation, and implementation of the control measures and reporting the results to Industrial Permit Section is a violation of the permit.

The permittee shall retain any and all records related to this documentation within the SWP3. In addition, this same information must also be submitted to the Industrial NPDES Permit Section on an annual basis.

“Terms and Conditions” to provide information in a SWP3:

Distinct from the effluent limitation provisions in the permit, the permit requires the discharger to prepare a Storm Water Pollution Prevention Plan (SWP3) for its facility. The SWP3 is intended to document the selection, design, installation, and implementation (including inspection, maintenance, monitoring, and corrective action) of control measures being used to comply with the effluent limits set forth in Part I.E. of the permit. In general, the SWP3 must be kept up-to-

date, and modified whenever necessary to reflect any changes in control measures that were found to be necessary to meet the effluent limitations in this permit.

The requirement to prepare a SWP3 is not an effluent limitation, rather it documents what practices the discharger is implementing to meet the effluent limitations in Part I.E. of the permit. The SWP3 is not an effluent limitation because it does not restrict quantities, rates, and concentrations of constituents which are discharged. Instead, the requirement to develop a SWP3 is a permit "term or condition" authorized under sections 402(a)(2) and 308 of the Act. Section 402(a)(2) states, "[t]he Administrator shall prescribe conditions for [NPDES] permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate." The SWP3 requirements set forth in this permit are terms or conditions under the Clean Water Act because the discharger is documenting information on how it intends to comply with the effluent limitations (and inspection and evaluation requirements) contained elsewhere in the permit. Thus, the requirement to develop a SWP3 and keep it updated is no different than other information collection conditions, as authorized by section 402(a)(2), in other permits.

6) For more information

The public should direct questions to Nicole Gardner, IDEM contact person with IDEM's Office of Water Quality, at (800) 451-6027 ext. 2-8707, (317) 232-8707, or via e-mail at ngardner@idem.IN.gov.

The media should direct inquiries to Amber Finkelstein, IDEM public information officer, at (800) 451-6027, ext. 2-8512, (317) 232-8512, or via e-mail to afinkels@idem.IN.gov.

Please visit the IDEM website at <http://www.in.gov/idem/5338.htm>.